



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,581	07/23/2003	Michael Reuschel	GS 0351 A US DIV	7736
7590	04/21/2005		EXAMINER	
Alfred J. Mangels 4729 Cornell Road Cincinnati, OH 45241-2433			NGUYEN, THU V	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,581

Applicant(s)

REUSCHEL ET AL.

Examiner

Thu Nguyen

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004 & 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/630,697.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The amendment filed on December 23, 2004 and January 18, 2005 has been entered. By this amendment, claims 1-7 have been canceled, and claims 8-10 are now pending in the application.

Claim Objections

1. Claim 8 is objected to because of the following informalities:

In claim 8, line 17, the phrase “and in that” should be corrected to “and”.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al (U.S Patent No. 6,292,730 B1) in view of Kumm (US 5,011,458).

As per claim 8, Takizawa discloses an apparatus for regulating the transmission ratio of a continuous variable transmission of a motor vehicle. The apparatus comprises: sensors 62, 64, 65-68, 69 (fig.2) for detecting operational transmission parameters (col.5, lines 33-48); an

electronic control unit including a microprocessor 61 (fig.2), and at least one memory (col.5, lines 60-67; col.6, lines 1-14), the electronic control unit includes a preliminary control device 75 (fig.3A) that determines a preliminary control value RatioO as a function of at least one transmission operating parameter No (col.8, lines 62-64); a comparator 79 (fig.3A) that compares a measured transmission ratio Ratio with a reference transmission ratio and derives an adjustment value RtoERR (col.8, lines 64-67); an adjusting device including components 84, 90, 82, 86, 87 (fig.3A) that receives the preliminary control value RatioO and the adjustment value RToERR as the set point value in order to adjust the transmission (col.9, lines 30-58). Takizawa, further, teaches that the preliminary control value is determined as a function of at least two operating parameters (col.8, lines 62-64).

Takizawa does not explicitly disclose storing the operating parameters associated with reference transmission ratios in a memory. However, Takizawa teaches including a memory device (col.5, lines 29-32), and receiving input data from the sensors (col.5, lines 36-40), further, storing input data in a memory location for data processing would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to store operating parameters Ni, No of Takizawa to a memory location in order to be able to retrieve the data in later processes.

Takizawa does not explicitly teach storing the preliminary control value and adjusting the preliminary control value so that the measured transmission ratio coincides with the reference transmission ratio when the control variable is approximately zero. However, storing pre-calculated data as a function of variable in a look up table to avoid recalculating the data each

time the variable changes would have been old and well known in the art. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to store the preliminary control value in a look up table as function of at least two operating parameters NI*, No in the apparatus of Takizawa in order to avoid performing division each time the parameter changes. Further, since Takizawa teaches that the control value RtoERR is obtained from the difference of the measured transmission ratio Ratio from box 78 (fig.3A) and the reference transmission ratio RatioO 75 (fig.3A) (col.8, lines 64-67), Takizawa inherently discloses that when the control value is at least approximately zero, measured transmission ratio 78 (fig.3A) coincides with the reference transmission ratio 75 (fig.3A) as claimed.

Takizawa does not explicitly disclose taking into account of changes in transmission operation over time including changes caused by wear of transmission parts. However, Kumm suggests taking into account of changes in transmission caused by wear by calibration (col.13, lines 36-40). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform calibration of the pulley radius in order to prevent incorrect calculation of transmission ratio.

As per claim 9, Takizawa teaches a diagnostic device (including components 84 and 90 (fig.3A)) that triggers predetermined monitoring functions based upon changes in the preliminary control value (col.9, lines 49-58).

As per claim 10, Takizawa discloses that the diagnostic device 90 (fig.3A) detects the changes in the transmission ratio as the function of the changes in the set point value R_{toERR} (fig.3A), and the diagnostic device triggers predetermined functions (deducting the speed ratio from the controllable max/min speed ratios; and calculating limiting values) in relation to the changes (col.9, lines 66-67; col.10, lines 1-9).

Response to Arguments

In response to applicant's argument on page 5, last paragraph, Takizawa does not explicitly disclose accounting for wear conditions as noted. However, independent claim 8 does not teach how the changes caused by wear of transmission parts are considered or are compensated. The limitation "to take into account changes ... wear of transmission parts" is stated in the preamble of the claims, this statement means little more than just a functional language. Moreover, the idea of correcting incorrect results caused by wear in the continuous variable transmission has been known as suggested by Kumm.

In response to applicant's argument on page 6 through page 7, storing the operating parameters and certain parameter such as the preliminary control value for later retrieval and processing would have been well known. The examiner does not believe that storing such the parameters should be considered as a novel and inventive feature of the present application. Moreover, storing such the parameters have no particular role in determining changes in the transmission operation over time.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

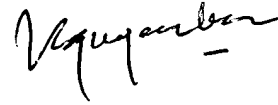
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (571) 272-6967. The examiner can normally be reached on T-F (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 15, 2005



THU V. NGUYEN
PRIMARY EXAMINER